Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

Final

AIR QUALITY PERMIT

Issued under 401 KAR 52:030

Permittee Name:	**The Four Rivers BioEnergy Company, Inc.**
Mailing Address:	**1637 Shar-Cal Road, P.O. Box 1056, Calvert City, KY 42029**
Source Name:	**The Four Rivers BioEnergy Company, Inc.**
Mailing Address:	**1637 Shar-Cal Road, P.O. Box 1056 Calvert City, KY 42029**
Source Location:	**Same as above**
Permit ID:	**F-07-047**
Agency Interest #:	**97253**
Activity ID:	**APE20070001**
Review Type:	**Conditional Major / Synthetic Minor, Construction / Operating**
Source ID:	**21-157-00066**
Regional Office:	**Paducah Regional Office 130 Eagle Nest Drive Paducah, KY 42003 (270) 898-8468**
County:	**Marshall**
Application Complete Date:	**August 27, 2006**
Issuance Date:	**November 27, 2007**
Revision Date:	**N/A**
Expiration Date:	**November 27, 2012**

John S. Lyons, Director
Division for Air Quality

Revised 05/07/07

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	Permit type	Log or Activity#	Complete Date	Issuance Date	Summary of Action
F-07-047	**Initial Issuance**	**APE20070001**	**8/27/07**	**11/27/07**	**Initial Construction Permit**

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:030, Federally-enforceable permits for non-major sources.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Biodiesel Plant

Emission Group BS01 - Units controlled by Biodiesel Process Vent Flare (BCE 1)

Unit 10, Transesterification: EU 100 - EU 115 controlled by BCE 2 or BCE 3, and BCE 1
Unit 11, Methylester ME Drying: EU 116 - EU 119 controlled by BCE 2 and BCE 1
Unit 12, Glycerin Neutralization: EU120 - EU 123 controlled by BCE 2 and BCE 1
Unit 14, Glycerin Evaporation: EU 124 - EU 127 controlled by BCE 2 and BCE 1
Unit 20, Tank Farm: EU 141 and EU 142 controlled by BCE 1
Unit 30, Utilities: EU 155 controlled by BCE 1

Description:

Control units BCE 3 (Vent Condenser) and BCE 2 (Air Scrubber) emissions are controlled by BCE 1 (Process Vent Flare). The maximum operating rate through BCE 1 is 0.02 million standard cubic feet per hour (mmscf/hr).

Emission Group BS01 Biodiesel Process Vent Flare			Maximum Rated Capacity	Control Device
Unit 10	EU100	Reactor #1	14,265 gallons	BCE 3: Vent Condenser
	EU101	Reactor #1 Separator	5,070 gallons	
	EU102	Reactor #2	14,265 gallons	
	EU103	Reactor #2 Separator	5,070 gallons	
	EU104	Methanol Column	7,795 gallons	
	EU105	Methyl Ester (ME) Washing Column	3,582 gallons	BCE 2: Air Scrubber
	EU106	Exhaust Air Scrubber	79 gallons	
	EU107	Wash Water Phase Separator	2,642 gallons	
	EU108	Maturity Reactor - ME Wash	400 gallons	
	EU109	Vent Condenser	351,539 Btu/hr	BCE 3: Vent Condenser
	EU110	Methanol Column OVHD Condenser	5,850,000 Btu/hr	
	EU111	Methanol Surge Tank	1,182 gallons	
	EU112	Methylate Surge Tank	53 gallons	
	EU113	Wash Water Tank	1,294 gallons	BCE 2: Air Scrubber

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant (Continued)

Emission Group BS01 Biodiesel Process Vent Flare			Maximum Rated Capacity	Control Device
Unit 10	EU114	Methanol Column Reflux Drum	201 gallons	BCE 3: Vent Condenser
	EU115	Collection Tank	5,046 gallons	BCE 2: Air Scrubber
Unit 11	EU116	ME Dryer 1st Stage	476 gallons	
	EU117	Drier 2nd Stage	612 gallons	
	EU118	ME Dryer Tank	2,113 gallons	
	EU119	ME Dryer Vacuum System	N/A	
Unit 12	EU120	Glycerin - Fat Separator	1,678 gallons	
	EU121	Glycerin Neutralization Reactor	528 gallons	
	EU122	Fatty Matter Collecting Vessel	550 gallons	
	EU123	Glycerin Water Receiver	92 gallons	
Unit 14	EU124	1st Effect Separator	1,007 lb/hr	
	EU125	2nd Effect Separator	4,275 lb/hr	
	EU126	Final Condenser	N/A	
	EU127	Unit 14 Vacuum System	4,567 pounds per hour (PPH)	
Unit 20	EU141	Methanol	60,883 gallons	BCE 1: Process Vent Flare
	EU142	Sodium Methylate Tank	60,883 gallons	
Unit 30	EU155	VOC Abatement Flare	540 standard cubic feet per minute (SCFM)	

APPLICABLE REGULATIONS:

401 KAR 63:015, *Flares*, is applicable to an emissions unit which means a device at the tip of a stack or other opening used for the disposal of waste gas streams by combustion.

1. Operating Limitations:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant (Continued)

2. Emission Limitations:

a. Pursuant to 401 KAR 63:015, Section 3, the visible emissions from the flare shall not exceed twenty (20) percent opacity for more than three (3) minutes in any one (1) day.

b. Refer to Section D for Source-Wide Emission Limitations.

Compliance Demonstration Method:

Refer to Subsection 3, *Testing Requirements* and Subsection 4, *Specific Monitoring Requirements* below to demonstrate compliance with the opacity limitation.

3. Testing Requirements:

The permittee shall use EPA Reference Method 22 to determine the smoke emissions from the flare to demonstrate compliance with the opacity limit in Subsection 2, *Emission Limitations*. The testing shall be performed and recorded monthly, and the Division reserves the right to require additional testing. [401 KAR 52:030, Section 10 and 401 KAR 50:045]

4. Specific Monitoring Requirements:

The permittee shall install and maintain a thermocouple or any other equivalent device to monitor the presence of a pilot flame in the flare. [401 KAR 52:030, Section 10]

5. Specific Recordkeeping Requirements:

a. The permittee shall keep records required by Subsection 3, *Testing Requirements* and supply such to the Division upon request.

b. Refer to Section F.2.

6. Specific Reporting Requirements:

See Section F, Conditions 5, 6, 7, 8 and 9.

7. Specific Control Equipment Operating Conditions:

The permitte shall maintain the presence of a pilot flame in the flare, when the flare is in operation (emission sent to the flare). Refer to Subsection 4, *Specific Monitoring Requirements*.

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant (Continued)

Emission Group BS02 - Units controlled by Glycerin Vacuum Condenser (BCE 4) and Glycerin Refining Units with no control

Unit 16, Glycerin Refining: EU 128, EU 129, EU 133 - EU 135, and EU 138 - EU 140 controlled by BCE 4
EU 130 - EU 132, EU 136, and EU 137 have no control device

Emission Group BS03 - Tanks controlled by Hydrochloric Acid Scrubber (BCE 5) and various tanks with no control

Unit 20, Tank Farm: EU 143 and EU 151 controlled by BCE 5
EU 144 - EU 150 have no control device

Description:

The maximum operating rate through Unit 16 is 3.18 tons of glycerin produced per hour. The maximum operating rate through Unit 20 is 18.31 tons of biodiesel produced per hour.

Emission Group BS02 Glycerin Vacuum Condenser			Maximum Rated Capacity	Control Device
Unit 16	EU128	Dryer	120 gallons	BCE 4: Glycerin Vacuum Condensers
	EU129	Distillation Column	7,661 gallons	
	EU133	Overhead Condenser	148,000 Btu/hr	
	EU134	Glycerin I Receiver	489 gallons	
	EU135	Glycerin II Receiver	106 gallons	
	EU138	Residue Still	140 gallons	
	EU139	Residue Still	140 gallons	
	EU140	Glycerin Distillation Vacuum System	N/A	
	EU 130	Bleaching Vessel	1,664 gallons	None
	EU 131	Bleaching Vessel	1,664 gallons	
	EU 132	Bleaching Vessel	1,664 gallons	
	EU 136	Hot Well	376 gallons	
	EU 137	Glycerin Receiver	100 gallons	

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant (Continued)

Emission Group BS03 Hydrochloric Acid Scrubber			Maximum Rated Capacity	Control Device
Unit 20	EU 143	37% HCL Acid Tank	9,948 gallons	BCE 5: HCL Acid Scrubber
	EU 151	HCI Scrubber Package	N/A	
	EU 144	Glycerin Water Tank	45,662 gallons	None
	EU 145	Diesel Fuel Tank	7,200 gallons	
	EU 146	Crude Glycerin (80%) Tank	59,211 gallons	
	EU 147	USP Glycerin Tank	46,020 gallons	
	EU 148	Biodiesel (RME) Tank	213,046 gallons	
	EU 149	Biodiesel (RME) Tank	213,046 gallons	
	EU 150	Neural Oil Tank (Soybean Oil)	49,825 gallons	

APPLICABLE REGULATIONS:

401 KAR 63:020, *Potentially hazardous matter or toxic substances,* is applicable to an emissions unit which emits or may emit potentially hazardous matter or toxic substances, provided such emissions are not elsewhere subject to the provisions of the administrative regulations of the Division for Air Quality.

1. Operating Limitations:

No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. [401 KAR 63:020 Section 3]

Compliance Demonstration Method:

The permittee is deemed to be in compliance during biodiesel production when the condenser and scrubber operate as specified in Subsection 7, *Specific Control Equipment Operating Conditions*.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant (Continued)

2. Emission Limitations:

See Section D.3, *Source-Wide Emission Limitations* for facility-wide hazardous air pollutant (HAP) and volatile organic compound (VOC) emission limitations.

Compliance Demonstration Method:

The permittee shall install, maintain, and operate the condenser and scrubber as specified in Subsection 7, *Specific Control Equipment Operating Conditions.*

3. Testing Requirements:

The permittee shall perform emissions testing in accordance with Section G.4.e. of this permit to determine compliance with HAP emissions specified in Section D.3, *Source-Wide Emission Limitations*, and the HAP removal efficiency of specified in Subpart 7, *Specific Control Equipment Operating Conditions*. The permittee also shall determine the scrubber liquid flow rate and differential pressure drop, and condenser inlet and outlet temperatures during the test. The emissions testing shall be repeated at least once every five years from the date of the prior test. The emissions testing shall be done in accordance with 401 KAR 59:005 Section 2(2) and KAR 50:045 Section 4.

4. Specific Monitoring Requirements:

The following parameters shall be monitored by the permittee during the semiannual inspections:

a. Condenser

(1) Vent gas flowrate.

(2) Liquid flow rate through the condenser.

(3) Inlet and outlet temperature at the condenser.

b. Scrubber

(1) Refined soybean oil flow rate.

(2) Pressure drop across the scrubber.

5. Specific Recordkeeping Requirements:

a. Preventive maintenance records for the condenser and scrubber shall be maintained in accordance with Subsection 7, *Specific Control Equipment Operating Conditions*.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant (Continued)

Computerized records shall be considered adequate to meet this requirement. This data shall be provided to the Division upon request.

b. A log of the results of the semiannual inspections performed on the condenser and scrubber shall be maintained in accordance with Subpart 7, *Specific Control Equipment Operating Conditions*.

c. Records of condenser vent flow rate and inlet and outlet temperature; and refined soybean oil flow to the scrubber and pressure drop across the scrubber, shall be recorded in accordance with the semiannual inspections in Subsection 7, *Specific Control Equipment Operating Conditions*.

d. The permittee shall keep calendar month records of the usage of refined vegetable oil, methanol and sodium methoxide in methanol, or any other HAP containing material.

e. A monthly log of operating hours, the amount of each raw material used; and the amount of Biodiesel produced, including purchase orders, invoices, and other documents, to support the quarterly log shall be maintained.

f. Refer to Section F.

6. Specific Reporting Requirements:

Reporting of the following shall be done on a semiannual basis:

a. Any deviations from requirements of Section B shall be reported.

b. The individual and combined HAP emissions for each month in the semiannual period determined in accordance with Section D.3, *Source-Wide Emission Limitations*, shall be reported.

c. The consecutive 12-month total of individual and combined HAP emissions for each month ending in the semiannual period determined in accordance with Section D.3, *Source-Wide Emission Limitations*, shall be reported.

7. Specific Control Equipment Operating Conditions:

a. The condenser and scrubber shall be operated at all times while storing liquid materials and operating the biodiesel system. The condenser and scrubber shall be inspected for proper operation semiannually. Preventive maintenance shall be performed in accordance with the manufacturer's recommendations, and shall include at minimum the following for the scrubber:

(1) Cleaning or replacement of spray nozzles;

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant (Continued)

(2) Lubrication of pumps, fans, etc.; and

(3) Check/calibration of critical instruments, e.g. water flow meters or indicators.

b. The condenser inlet temperatures shall be maintained at all times at temperatures established during the most recent performance test. The liquid flowrate shall be established during the most recent performance test.

c. The flow rate and the pressure drop across the scrubber shall be established during the most recent performance test.

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant (Continued)

Emission Group BS04 - Cooling Tower Exhaust and Degasser

Description:

Emission Group BS04 Cooling Tower Exhaust			Maximum Operating Rate	Control Device
Unit 30	EU 152	Cooling Tower	2.76 million gallons/hr	None
	EU 154	Degasser	15 gallons/min	

APPLICABLE REGULATIONS:

None

1. **Operating Limitations:**

   Refer to Section D for source-wide emission limitations and compliance demonstration methods.

2. **Emission Limitations:**

   None

3. **Testing Requirements:**

   None

4. **Specific Monitoring Requirements:**

   None

5. **Specific Recordkeeping Requirements:**

   None

6. **Specific Reporting Requirements:**

   See Section F, Conditions 5, 6, 7, 8 and 9.

7. **Specific Control Equipment Operating Conditions:**

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant (Continued)

None

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant (Continued)

Emission Unit BS05 - Boiler

Description:

Emission Unit BS05 Boiler			Maximum Rated Capacity	Fuel	Control Device
Unit 30	EU 153	Boiler with Deaerater & Blow Down Separator	51.2 mmBtu/hr	Natural Gas only	None

APPLICABLE REGULATIONS:

401 KAR 59:015, *New indirect heat exchangers*, is applicable to an emissions unit with a capacity of less than 250 mmBtu/hr which commenced on or after April 9, 1972. Note: Total heat input capacity of the facility = 51.2 + 150 + 150 = 351.2 mmBtu/hr.

40 CFR 60 Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, is applicable to these boilers since each boiler for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 mmBtu/hr) or less, but greater than or equal to 2.9 MW (10 mmBtu/hr).

1. **Operating Limitations:**

   To preclude applicability of 401 KAR 52:020 for Title V permits, the boiler at the biodiesel plant shall only operate when the ethanol plant boilers are not operating.

   Compliance Demonstration Method:

   Refer to Section F.9 for compliance certification.

2. **Emission Limitations:**

   a. Pursuant to 401 KAR 59:015, Section 4(1)(c), particulate emissions shall not exceed 0.1 lb/mmBtu for the boiler.

   b. Pursuant to 401 KAR 59:015, Section 4(2), emissions shall not exceed 20% opacity based on a six minute average.

   c. Pursuant to 401 KAR 59:015, Section 5(1)(c), sulfur dioxide emissions shall not exceed 0.8 lb/mmBtu for the boiler.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant (Continued)

Compliance Demonstration Method:

While burning natural gas, this unit is in compliance with the PM, opacity, and SO_2 limits.

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

5. Specific Recordkeeping Requirements:

See Section F, Conditions 5, 6, 7, 8 and 9.

6. Specific Reporting Requirements:

See Section F, Conditions 5, 6, 7, 8 and 9.

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Ethanol Plant

Emission Group S1 - Grain Unloading
Emission Group S2 - Reclaim
Emission Group S3 - Grain Milling
Emission Unit S4 - Dust Collection Receiver
Emission Group S5 & S6 - DDGS Cooling System
Emission Group S7 - DDGS Transfer
Emission Unit S9 - DDGS Loadout (Rail)
Emission Group S10 - CO_2 Scrubber/RTOs/Dryers/Various Processes
Emission Unit S15 - Cooling Tower
Emission Unit S17 - DDGS Loadout (Barge)

Description:

K - thousand
BPH - bushels per hour
BU - bushels
CFM - cubic foot (feet) per minute
GAL - gallon
VMT - Vehicle-Miles Travelled

Emission Group S1 - Grain Unloading		Maximum Rated Capacity	Maximum Operating Rate	Control Device
EU01	Truck Unload Pits (2) & Conveyor	20K BPH	131.85 tons/hr (Truck & Rail) 125.00 tons/hr (Barge)	Baghouse
EU02	Rail Unload Pit & Conveyor	40K BPH		
EU03	Elevator Leg (1) - Truck	20K BPH		
EU04	Elevator Legs (2) Weigh Hopper - Rail	40K BPH		
EU05	Storage Conveyor (2)	40K BPH		
EU06	Grain Silo No. 1 (w/ vent)	600K BU		
EU07	Grain Silo No. 2 (w/ vent)	600K BU		
EU08	Storage/Reclaim Conveyor (2)	10K BPH		
EU09	Elevator Leg (downstream of reclaim conveyor) (2)	10K BPH		
EU10	Unloading Baghouse - Truck & rail	45,000 ACFM		

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Ethanol Plant (Continued)

Emission Group S2 - Reclaim		Maximum Rated Capacity	Maximum Operating Rate	Control Device
EU11	Grain Transfer Conveyor	10K BPH	131.85 tons/hr	Baghouse
EU12	Scalper	5K BPH		
EU13	Mill Surge Bin	10K BU		
EU14	Hammermill Feed Conveyor	5K BPH		
EU15	Reclaim Baghouse	5K ACFM		
EU16	Elevator Leg	5K BPH		
EU17	Elevator Leg	20K CFH		

Emission Group S3 - Grain Milling		Maximum Rated Capacity	Maximum Operating Rate	Control Device
EU18	Hammermill No. 1	1.65K BPH	131.85 tons/hr	Baghouse
EU19	Hammermill No. 2	1.65K BPH		
EU20	Hammermill No. 3	1.65K BPH		
EU21	Hammermill No. 4	1.65K BPH		
EU23	Milling Baghouse (4 Filters/1 stack)	28,800 ACFM		
EU24	DDGS Storage	N/A		

Emission Unit S4 - Dust Collection Receiver		Maximum Rated Capacity	Maximum Operating Rate	Control Device
EU25	Dust Collector Receiver	500 ACFM	131.85 tons/hr	Baghouse

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Ethanol Plant (Continued)

Emission Group S5 & S6 - DDGS Cooling System		Maximum Rated Capacity	Maximum Operating Rate	Control Device
EU26	DDGS Cooler (2) - 65% dryer, 35% atmosphere	N/A	42.38 tons/hr	Baghouse
EU27	DDGS Cooler Baghouse	21,000 ACFM		

Emission Group S7 - DDGS Transfer		Maximum Rated Capacity	Maximum Operating Rate	Control Device
EU28	DDGS Surge Bin and Elevator Leg	16,600 CF	42.38 tons/hr	Baghouse
EU29	DDGS Transfer Conveyor (3)	20K CFH		
EU30	DDGS Transfer Baghouse	5,000 ACFM		

Emission Unit S9 - DDGS Loadout (Rail)		Maximum Rated Capacity	Maximum Operating Rate	Control Device
EU31	DDGS Loadout Baghouse - Rail	3,600 ACFM	42.38 tons/hr	Baghouse

Emission Group S10 - CO_2 Scrubber/RTOs/Dryers/Various Processes		Maximum Rated Capacity	Maximum Operating Rate	Control Device
EU32	CO_2 Scrubber	N/A	42.38 tons/hr	Scrubber & RTO
EU33	Beer Well	999,000 GAL		
EU34	Fermenter No. 1	790,000 GAL		
EU35	Fermenter No. 2	790,000 GAL		

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Ethanol Plant (Continued)

Emission Group S10 - CO_2 Scrubber/RTOs/Dryers/Various Processes		Maximum Rated Capacity	Maximum Operating Rate	Control Device
EU36	Fermenter No. 3	790,000 GAL	42.38 tons/hr	Scrubber & RTO
EU37	Fermenter No. 4	790,000 GAL		
EU38	Fermenter No. 5	790,000 GAL		
EU39	Fermenter No. 6	790,000 GAL		
EU40	Fermenter No. 7	790,000 GAL		
EU41	Slurry Blender	N/A		
EU42	Slurry Tank #1	27,000 GAL		
EU43	Slurry Tank #2	27,000 GAL		
EU44	Yeast Tank #1	30,000 GAL		
EU45	Yeast Tank #2	30,000 GAL		
EU46	Rectifier Condenser	N/A		
EU47	Molecular Sieve Units	N/A		
EU48	Vacuum System	N/A		
EU49	Centrifuges	N/A		
EU50	Centrate Tank	3,750 GAL		
EU51	Evaporators	N/A		
EU52	DDGS Dryer (2)	92 mmBtu/hr		
EU53	Regenerative Thermal Oxidzer (2)	18 mmBtu/hr		

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Ethanol Plant (Continued)

Emission Unit S15 - Cooling Tower		Maximum Rated Capacity	Maximum Operating Rate	Control Device
EU61	Cooling Tower	46,000 GPM	2.76 million gallons/hr	None

Emission Unit S17 - DDGS Loadout (Barge)		Maximum Rated Capacity	Maximum Operating Rate	Control Device
EU63	DDGS Loadout (Barge)	TBD	42.38 tons/hr	None

APPLICABLE REGULATIONS:

401 KAR 59:010, *New process operations*, is applicable to an emissions unit commenced on or after July 2, 1975.

401 KAR 63:020, *Potentially hazardous matter or toxic substances*, is applicable to an emissions unit which emits or may emit potentially hazardous matter or toxic substances, provided such emissions are not elsewhere subject to the provisions of the administrative regulations of the Division for Air Quality.

1. Operating Limitations:

Refer to Section D for source-wide emission limitations and compliance demonstration methods.

2. Emission Limitations:

a. Particulate matter emissions from each stack shall not exceed the calculated allowable rate as determined by the following equation. [401 KAR 59:010 Section 3(2)]

$E_{Allowable}$ = 2.34 lb/hr for P less than or equal to 0.5 ton/hr

= $3.59 * P^{0.62}$ for P greater than 0.5 ton/hr but less than or equal to 30 ton/hr

= $17.31 * P^{0.16}$ for P greater than 30 ton/hr

where

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Ethanol Plant (Continued)

$E_{Allowable}$ = Allowable rate of particulate emissions (lbs/hr)

P = Process weight rate (tons/hr), equal to the total process weight for a period that covers a complete batch operation (tons/batch) divided by the hours of actual process operation during the batch operation (hrs/batch)

b. Pursuant to 401 KAR 59:010, Section 3(1)(a), any continuous emissions into the open air shall not equal or exceed 20% opacity based on a six-minute average.

Compliance Demonstration Method:

a. The following table of emissions factors shall be used to show compliance with the PM emission limit:

Emission Group #	Emission Factor (lbs PM / ton)	Control Efficiency (%)
S1	Truck & Rail - 0.05853 Fugitives - 0.035	80
	Barge - 0.09564	0
S2	0.0065	80
S3	0.14961	95
S4	0.002771	95
S5 & S6	0.3405	95
S7	0.081	95
S9	Truck & Rail - 0.05818	95
	Fugitives - 0.0033	0
SV10	2.4	90
SV17	0.016	0

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Ethanol Plant (Continued)

Emission Group #	Emission Factor (lbs PM / 10^6 Gallons of Cooling Water Circulated)	Control Efficiency (%)
SV15	0.2085	0

where, PM emissions in pound per hour = (monthly processing rate in tons / month) (1 month / hours of operating that month) (emission factor) (1 – control efficiency)

b. For compliance with visible emissions limit, see Subsection 3, *Testing Requirements* and Subsection 4, *Specific Monitoring Requirements*.

3. Testing Requirements:

a. The permittee shall determine the opacity of emissions from each stack using U.S. EPA Reference Method 9 if visible emissions from the stack are seen (not including condensed water vapor within the plume) during monitoring (Refer to Subsection 4, *Specific Monitoring Requirements*).

b. The facility shall utilize the following source test methods to be performed within 180 days of startup for the CO_2 Scrubber.

Test Method	Parameter / Pollutant
USEPA Method 18	GC/FID analysis with on site testing required (acetaldehyde, acrolein, formaldehyde, and methanol)
USEPA Method 25A	Determination of Total VOC Emissions
USEPA Method 9	Opacity

4. Specific Monitoring Requirements:

The permittee shall perform a qualitative visual observation of the opacity of emissions from the stack on a weekly basis and maintain a log of the observations. If visible emissions from the stack are seen (not including condensed water vapor within the plume), then the opacity shall be determined by Reference Method 9. If emissions are in excess of the applicable opacity limit, then an inspection shall be initiated of control equipment for any necessary repairs.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Ethanol Plant (Continued)

5. Specific Recordkeeping Requirements:

The permittee shall retain records of the following:

a. The tons of raw material throughput and hours of operation shall be maintained on a monthly basis from each emission unit.

b. Weekly qualitative opacity readings from each stack.

c. The opacity determined by Reference Method 9, when taken, and documentation of any repairs that were made due to any opacity reading, which exceeded the standard.

d. A log showing the date of all routine or other maintenance, malfunction or repair of the CO_2 scrubber, RTO, and baghouses, the nature of the action taken on such date and any corrective action or preventive measures taken.

6. Specific Reporting Requirements:

See Section F, Conditions 5, 6, 7, 8 and 9.

7. Specific Control Equipment Operating Conditions:

The CO_2 scrubber shall be operated in the range of temperature and flowrates specified by the manufacture for proper operation of the device.

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Ethanol Plant (Continued)

Emission Group S11 - Package Boilers

Description:

Emission Group S11 - Package Boilers		Maximum Rated Capacity	Fuel	Control Device
EU54	Package Boiler No. 1	150 mmBtu/hr	Natural Gas only	None
EU55	Package Boiler No. 2	150 mmBtu/hr		

APPLICABLE REGULATIONS:

401 KAR 59:015, *New indirect heat exchangers*, is applicable to an emissions unit with a capacity of less than 250 mmBtu/hr which commenced on or after April 9, 1972.

40 CFR 60 Subpart Db, *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units*, applies to steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has input capacity from fuels combusted in the steam generating unit of greater than 29 MW (100 mmBtu/hour).

1. Operating Limitations:

None

2. Emission Limitations:

a. Pursuant to 401 KAR 59:015, Section 4(1)(b), particulate emissions shall not exceed 0.10 lb/mmBtu for each boiler.

b. Pursuant to 401 KAR 59:015, Section 4(2), emissions shall not exceed 20% opacity based on a six minute average.

c. Pursuant to 401 KAR 59:015, Section 5(1)(b), sulfur dioxide emissions shall not exceed 0.8 lb/mmBtu for each boiler.

d. Pursuant to 40 CFR 60.44b(l), no owner or operator of an affected facility that commenced construction after July 9, 1997 shall cause to be discharged into the atmosphere any gases that contain NO_X (expressed as NO_2) in excess of 86 ng/J (0.20 lb/mmBtu) heat input.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Ethanol Plant (Continued)

Compliance Demonstration Method:

While burning natural gas, this unit is in compliance with the PM, opacity, and SO_2 limits. Compliance with the NO_X limits is based on a 30-day rolling average basis. [40 CFR 60.44b(i)] Refer to 3, Testing Requirements.

3. Testing Requirements:

Pursuant to 40 CFR 60.46b(c), compliance with the NO_X emission standards under 40 CFR 60.44b shall be determined through performance testing under 40 CFR 60.46b(e) or (f), or (g) and (h), as applicable.

4. Specific Monitoring Requirements:

The permittee shall monitor and maintain records of the following information: the total monthly (each calendar month) Package Boilers fuel usage.

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain monthly records of the annual emission rate of PM/PM_{10}, SO_2, and NO_X on a 12-month rolling average for the previous 12 months.

b. The permittee shall record and maintain records of the amounts of natural gas combusted during each day and calculate the annual capacity factor for natural gas for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. [40 CFR 60.49b(d)]

c. See Section F, Conditions 5, 6, 7, 8 and 9.

6. Specific Reporting Requirements:

a. Fuel analysis required under 40 CFR 60 Subpart Db, shall be submitted semiannually.

b. See Section F, Conditions 5, 6, 7, 8 and 9.

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Ethanol Plant (Continued)

Emission Group S12 - Ethanol Loadout
Emission Group S13 - Anaerobic Treatment Module (ATM)
Emission Unit S16 - Ethanol Loadout (Barge)

Description:

Emission Group S12 - Ethanol Loadout		Maximum Rated Capacity	Maximum Operating Rate	Control Device
EU56	Volatile Organic Liquid (VOL) Loading (truck and rail)	120,000 gallons/hr	0.000085 mmscf/yr (Pilot Emission) 0.0012 mmscf/hr 0.445 mmscf/yr (Flaring Emission) 115,500 10^3 GAL/yr (Loading Operations)	Flare
EU57	VOL Truck and Rail Loading Flare	1,500 CFM 13.6 mmBtu/hr		

Emission Group S13 - Anaerobic Treatment Module (ATM)		Maximum Rated Capacity	Maximum Operating Rate	Control Device
EU58	ATM	N/A	0.657 mmscf/yr (Pilot Emission) 0.003 mmscf/hr 3.04 mmscf/yr (Flaring Emission)	Flare
EU59	ATM Flare	4.62 mmBtu/hr		

Emission Unit S16 - Ethanol Loadout (Barge)		Maximum Rated Capacity	Maximum Operating Rate	Control Device
EU62	Ethanol Loadout Flare (Barge)	7,000 BPH 50 mmBtu/hr	0.447 mmscf/yr (Pilot Emission) 0.0425 mmscf/hr 25.5 mmscf/yr (Flaring Emission)	Flare

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Ethanol Plant (Continued)

APPLICABLE REGULATIONS:

401 KAR 63:015, *Flares*, is applicable to an emissions unit which means a device at the tip of a stack or other opening used for the disposal of waste gas streams by combustion.

1. Operating Limitations:

None

2. Emission Limitations:

a. Pursuant to 401 KAR 63:015, Section 3, the visible emissions from the flare shall not exceed twenty (20) percent opacity for more than three (3) minutes in any one (1) day.

b. Refer to Section D for Source-Wide Emission Limitations.

Compliance Demonstration Method:

Refer to Subsection 3, *Testing Requirements* and Subsection 4, *Specific Monitoring Requirements* below to demonstrate compliance with the opacity limitation.

3. Testing Requirements:

The permittee shall use EPA Reference Method 22 to determine the smoke emission from the flare to demonstrate compliance with the opacity limit in Subsection 2, *Emission Limitations*. The testing shall be performed and recorded monthly, and the Division reserves the right to require additional testing. [401 KAR 52:030, Section 10 and 401 KAR 50:045]

4. Specific Monitoring Requirements:

The permittee shall install and maintain a thermocouple or any other equivalent device to monitor the presence of a pilot flame in the flare. [401 KAR 52:030, Section 10]

5. Specific Recordkeeping Requirements:

a. The permittee shall keep records required by Subsection 3, *Testing Requirements* and supply such to the Division upon request.

b. Refer to Section F.2.

6. Specific Reporting Requirements:

See Section F, Conditions 5, 6, 7, 8 and 9.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Ethanol Plant (Continued)

7. Specific Control Equipment Operating Conditions:

The permitte shall maintain the presence of a pilot flame in each flare, when the flare is in operation (emission sent to the flare). Refer to Subsection 4, *Specific Monitoring Requirements*.

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Ethanol Plant (Continued)

Emission Group - Storage Tanks

Description:

Tank ID #	Contents	Capacity gallons (m^3)	Vapor Pressure psi (kPa)	Roof Type
EU73 (TF3)	Gasoline Denaturant Storage	150,000 (567.8118)	5.07 (34.97)	Internal Floating Roof
EU74 (TF1)	190 Proof Storage	300,000 (1,135.624)	0.63 (4.36)	Internal Floating Roof
EU75 (TF2)	200 Proof Storage	300,000 (1,135.624)	0.63 (4.36)	Internal Floating Roof
EU76 (TF4)	Denatured Alcohol Storage No.1	1,500,000 (5,678.118)	0.74 (5.14)	Internal Floating Roof
EU77 (TF5)	Denatured Alcohol Storage No.2	1,500,000 (5,678.118)	0.74 (5.14)	Internal Floating Roof

APPLICABLE REGULATIONS:

40 CFR 60 Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984*, is applicable to storage tanks since which storage vessel has a capacity greater than 75 cubic meters (19,812.9 gallon) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.

1. Operating Limitations:

The owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with the following: [40 CFR 60.112b(a)]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Ethanol Plant (Continued)

A fixed roof in combination with an internal floating roof meeting the following specifications:

a. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

b. Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:

(1) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.

(2) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.

(3) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

c. Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

d. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.

e. Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.

f. Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Ethanol Plant (Continued)

g. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

h. Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

i. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

Compliance Demonstration Method:

For compliance with 40 CFR 60.112b(a), refer to Subsection 4. *Specific Monitoring Requirements*, Subsection 5. *Specific Recordkeeping Requirements*, and 6. *Specific Reporting Requirements*.

2. Emission Limitations:

None

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

After installing the control equipment required to meet 40 CFR 60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall: [40 CFR 60.113b(a)]

a. Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with volatile organic liquid (VOL). If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.

b. For vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Ethanol Plant (Continued)

Administrator in the inspection report required in 40 CFR 60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

c. For vessels equipped with a double-seal system as specified in 40 CFR 60.112b(a)(1)(ii)(B):

(1) Visually inspect the vessel as specified in Subsection 4.d of this section at least every 5 years; or

(2) Visually inspect the vessel as specified in Subsection 4.b of this section.

d. Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in Subsection 4.b and 4.c(2) of this section and at intervals no greater than 5 years in the case of vessels specified in Subsection 4.c(1) of this section.

e. Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by Subsection 4.a and 4.d of this section to afford the Administrator the opportunity to have an observer present. If the inspection required by Subsection 4.d of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

5. Specific Recordkeeping Requirements:

a. Pursuant to 40 CFR 60.116b(a) and (b), the permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. These records shall be maintained for the life of the vessel.

b. Pursuant to 40 CFR 60.116b(c), the permitte shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Ethanol Plant (Continued)

c. Pursuant to 40 CFR 60.115b(a)(2), the permitte shall keep a record of each inspection performed as required by 40 CFR 60.113b (a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

6. Specific Reporting Requirements:

a. Pursuant to 40 CFR 60.7(a)(1), the permittee shall furnish the Division with written notification of the date construction of the tank is commenced, postmarked no later than 30 days after such date.

b. Pursuant to 40 CFR 60.7(a)(3), the permittee shall furnish the Division with written notification of the actual date of initial startup, postmarked within 15 days after such date.

c. Pursuant to 40 CFR 60.115b(a)(1), the permittee shall furnish the Division with a report that describes the control equipment and certifies that the control equipment meets the specifications of 60.112b(a)(1) and 60.113b(a)(1). This report shall be an attachment to the notification required by 60.7(a)(3).

d. Pursuant to 40 CFR 60.115b(a)(3), if any of the conditions described in 40 CFR 60.113b(a)(2) are detected during the annual visual inspection required by 40 CFR 60.113b(a)(2), a report shall be furnished to the Division within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

e. Pursuant to 40 CFR 60.115b(a)(4), after each inspection required by 40 CFR 60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in 40 CFR 60.113b(a)(3)(ii), a report shall be furnished to the Division within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of 40 CFR 61.112b(a)(1) or 60.113b(a)(3) and list each repair made.

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant and Ethanol Plant

Emission Unit BSF1 - Equipment Leaks
Emission Unit Area 3 - Equipment Leaks

Description:

Fugitive emissions from equipment leaks are subject to 40 CFR 60 Subpart VV, Standards of Performance.

Emission Unit BSF1 and Emission Unit Area 3	Control Device
Equipment Leaks	Subpart VV Control

APPLICABLE REGULATIONS:

40 CFR 60 Subpart VV, *Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry,* is applicable to affected facilities in the synthetic organic chemicals manufacturing industry that commences construction or modification after January 5, 1981. The Subpart VV regulates emissions of VOCs from equipment leaks (valves, flanges, pump seals, etc).

1. Operating Limitations:

Pumps in Light Liquid Service

a. (1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485(b), except as provided in 40 CFR 60.482-1(c) and 40 CFR 60.482-2(d), (e), and (f). [40 CFR 60.482-2(a)(1)]

(2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. [40 CFR 60.482-2(a)(2)]

b. (1) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. [40 CFR 60.482-2(b)(1)]

(2) If there are indications of liquids dripping from the pump seal, a leak is detected. [40 CFR 60.482-2(b)(2)]

c. (1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9. [40 CFR 60.482-2(c)(1)]

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [40 CFR 60.482-2(c)(2)]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant and Ethanol Plant (Continued)

Valves in Gas/Vapor Service and Valves in Light Liquid Service

d. Each valve shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485(b) and shall comply with 40 CFR 60.482-7(b) through (e), except as provided in 40 CFR 60.482-7(f), (g), and (h), 40 CFR 60.483-1,2, and 40 CFR 60.482-1(c). [40 CFR 60.482-7(a)]

e. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. [40 CFR 60.482-7(b)]

f. (1) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected. [40 CFR 60.482-7(c)(1)]

(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months. [40 CFR 60.482-7(c)(2)]

g. (1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after the leak is detected, except as provided in 40 CFR 60.482-9. [40 CFR 60.482-7(d)(1)]

(2) A first attempt at repair shall be made no later than 5 calendar day after each leak is detected. [40 CFR 60.482-7(d)(2)]

h. First attempts at repair include, but are not limited to, the following best practices where practicable:

(1) Tightening of bonnet bolts;

(2) Replacement of bonnet bolts;

(3) Tightening of packing gland nuts;

(4) Injection of lubricant into lubricated packing.

2. Emission Limitations:

None

3. Testing Requirements:

Refer to Subsection 1, *Operating Limitations*.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant and Ethanol Plant (Continued)

4. Specific Monitoring Requirements:

a. Refer to Subsection 1, *Operating Limitations*.

b. The permittee shall monitor the amount of raw materials and final products for use in AP-42 emission calculations for pumps and valves in light liquid service and valves in gas/vapor service.

5. Specific Recordkeeping Requirements:

All Piping Equipment (Valves and Pumps)

a. In accordant with 40 CFR 60.7(b), the facility shall maintain records of the occurrence of any startup, shutdown, or malfunction in the operation of all piping equipment.

b. When each leak is detected as specified in 40 CFR 60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following requirements apply: [40 CFR 486(b)]

(1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

(2) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in 40 CFR 60.482-7(c) and no leak has been detected during those 2 months.

(3) The identification on equipment except on a valve, may be removed after it has been repaired.

c. When each leak is detected as specified in 40 CFR 60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following information shall be recorded in a log and shall be kept for 2 years in readily accessible locations: [40 CFR 486(c)]

(1) The instrument and operator identification numbers and the equipment identification number.

(2) The date the leak was detected and the dates of each attempt to repair the leak.

(3) Repair methods applied in each attempt to repair the leak.

(4) “Above 10,000” if the maximum instrument reading measured by the methods specified in 40 CFR 60.485(a) after each repair attempt is equal to or greater than 10,000 ppm.

(5) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant and Ethanol Plant (Continued)

(6) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.

(7) The expected date of successful repair of the leak if a leak is not repaired within 15 days.

(8) Dates of process unit shutdowns that occur while the equipment is unrepaired.

(9) The date of successful repair of the leak.

d. The facility shall develop and maintain a list of identification numbers for equipment subject to 40 CFR Part 60 Subpart VV.

e. The facility shall maintain a list of identification numbers for equipment that are designated for no detectable emissions as provided at 40 CFR 60.482-2(e) and 40 CFR 60.484-7(f). The designation shall be signed by a facility representative.

f. The facility shall maintain a list of equipment identification numbers for pressure relief devices.

g. The facility shall maintain records of the dates of each compliance test as required, the background level measured during each compliance test and the maximum instrument reading measured at the equipment during each compliance test.

h. The facility shall maintain a list of identification numbers for equipment in vacuum service.

i. All records required to be kept by this permit shall be maintained on site at the facility for at least two (2) years from the date of record.

6. Specific Reporting Requirements:

a. The facility shall submit semiannual reports to the Division beginning six months after the initial startup date. [40 CFR 60.487(a)]

b. The initial semiannual report to the Division shall include the following information: [40 CFR 60.487(b)]

(1) Process unit identification.

(2) Number of valves subject to the requirements of 40 CFR 60.482-7, excluding those valves designated for no detectable emissions under the provisions of 40 CFR 60.482-7(f).

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant and Ethanol Plant (Continued)

(3) Number of pumps subject to the requirements of 40 CFR 60.482-2, excluding those pumps designated for no detectable emissions under the provisions of 40 CFR 60.482-2(e) and those pumps complying with 40 CFR 60.482-2(f).

c. All semiannual reports to the Division shall include the following information, summarized form the information in 40 CFR 60.486. [40 CFR 60.487(c)]

(1) Process unit identification.

(2) For each month during the semiannual reporting period,

(A) Number of valves for which leaks were detected as described in 40 CFR 60.482-7(b) or 60.483-2,

(B) Number of valves for which leaks were not repaired as required in 40 CFR 60.482-7(d)(1),

(C) Number of pumps for which leaks were detected as described in 40 CFR 60.482-2(b) and (d)(6)(i),

(D) Number of pumps for which leaks were not repaired as described in 40 CFR 60.482-2(c)(1) and (d)(6)(ii),

(E) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.

(3) Dates of process unit shutdowns which occurred within the semiannual reporting period.

(4) Revision to items reported according to 40 CFR 60.487(b) if changes have occurred since the initial report or subsequent revision to the initial report.

d. The facility shall report the results of all performance tests to the Division, by reference, 40 CFR 60.8.

e. See Section F, Conditions 5, 6, 7, 8 and 9.

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant and Ethanol Plant (Continued)

Emission Unit BSF2 - Paved Roads
Emission Unit Area 4 - Paved Roads

Description:

Emission Unit BSF2	Maximum Rated Capacity	Control Device
Internal Biodiesel Plant Paved Roads	0.892 VMT/hr	None

Emission Unit Area 4	Maximum Rated Capacity	Control Device
Internal Ethanol Plant Paved Roads	0.4717 VMT/hr	None

APPLICABLE REGULATIONS:

401 KAR 63:010, *Fugitive Emissions*, is applicable to each affected facility as an apparatus, operation, or road which emits or may emit fugitive emissions provided that the fugitive emissions from such facility are not elsewhere subject to an opacity standard within the administrative regulations of the Division for Air Quality.

1. Operating Limitations:

Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter (PM) from becoming airborne. Such reasonable precautions shall include, when applicable, but not limited to the following:

a. Application and maintenance of asphalt, oil, water, or suitable chemicals on roads, material stockpiles, and other surfaces which can create airborne dusts;

b. Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne;

c. The maintenance of paved roads in a clean condition; and

d. The prompt removal of earth or other material from a paved street which earth or other material has been transported thereto by trucking or earth moving equipment or erosion by water.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant and Ethanol Plant (Continued)

Compliance Demonstration Method:

Compliance will be demonstrated by the good operating procedures listed above and see Subsection 5, *Specific Recordkeeping Requirements*.

2. Emission Limitations:

Pursuant to 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

Compliance Demonstration Method:

Compliance by good operating procedures, see Subsection 1, *Operating Limitations*, and visual observation of no fugitive dust emissions beyond the property line.

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain records of the calculations to determine the fugitive emission from paved roads with all data used in the calculations. Emission calculations shall be based on the most current AP-42 emission factors for paved roadways for that year.

b. The permittee shall keep a log of the reasonable precautions taken to prevent particulate matter form becoming airborne on a weekly basis.

6. Specific Reporting Requirements:

See Section F, Conditions 5, 6, 7, 8 and 9.

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant and Ethanol Plant (Continued)

Emission Unit S14 - Emergency Firewater Pump

Description:

Emission Unit S14 - Emergency Firewater Pump		Maximum Rated Capacity	Maximum Operating Rate	Control Device
EU60	Emergency Firewater Pump	202 bhp/hr	100 hrs/yr	None

Note, it will provide emergency operations to both the ethanol and biodiesel facilities.

APPLICABLE REGULATIONS:

40 CFR 60 Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, is applicable to the emergency generator that commence construction after July 11, 2005 and manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

1. Operating Limitations:

a. Pursuant to 40 CFR 60.4211(e), emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. For owners and operators of emergency engines meeting standards under 40 CFR 60.4205 but not 40 CFR 60.4204, any operation other than emergency operation, and maintenance and testing as permitted in this section, is prohibited.

b. Pursuant to 40 CFR 60.4207(a), beginning October 1, 2007, the permittee shall only use diesel fuel that meets the requirements of 40 CFR 80.510(a).

c. Pursuant to 40 CFR 60.4207(b), beginning October 1, 2010, the permittee shall only use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.

Compliance Demonstration Method:

Refer to Subsection 4, *Specific Monitoring Requirements* and Subsection 5, *Specific Recordkeeping Requirements*.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant and Ethanol Plant (Continued)

2. Emission Limitations:

a. Pursuant to 40 CFR 60.4202(d), beginning with the model year (2008), stationary compression ignition (CI) internal combustion engine (ICE) manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 of 40 CFR 60 Subpart IIII, for all pollutants, for the same model year and NFPA nameplate power.

b. Pursuant to 40 CFR60.4205(c), owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 of 40 CFR 60 Subpart IIII, for all pollutants.

c. Pursuant to 40 CFR 60.4206, to assure compliance with the emission standards, owners and operators of stationary CI ICE must operate and maintain stationary CI ICE according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.

d. Refer to Section D for source-wide emission limitations and compliance demonstration methods.

Compliance Demonstration Method:

For compliance, see Subsection 3, *Testing Requirements* and Subsection 4, *Specific Monitoring Requirements*.

3. Testing Requirements:

To satisfy the requirements for an initial performance test pursuant to 40 CFR 60.8, the permittee shall submit to the Division a copy of the manufacturer's certified emissions certificate supplied with the engine within 90 days of achieving maximum load but no later than 180 days after installation.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the amount of diesel fuel consumed by the generator on a monthly basis.

b. The permittee shall monitor the hours of operation on a monthly basis for the emission unit. Pursuant to 40 CFR 60.4209(a), the permittee shall install a non-resettable hour meter on each unit prior to the start-up on the unit's engine.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Biodiesel Plant and Ethanol Plant (Continued)

5. Specific Recordkeeping Requirements:

The permittee shall retain records of the following:

a. A log showing the date of all routine or the nature of the action taken on such date and any corrective action or preventive measures taken.

b. Total amount of diesel fuel consumed by the generator on a monthly basis and on a consecutive twelve (12) month total.

c. The hours of operation of the generator on a monthly basis and on a consecutive twelve (12) month total.

d. The manufacturer's certified emissions certificate, manufacturer's written operating instructions, and any procedures develop by the owner or operator that are approved by engine manufacturer, over the entire life of the engine.

6. Specific Reporting Requirements:

See Section F, Conditions 5, 6, 7, 8 and 9.

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:030, Section 6. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary.

Description	Generally Applicable Regulation
Corrosion Inhibitor Storage Tank	401 KAR 60:005
Centrate Tank	401 KAR 60:005
Thin Stillage Tank	401 KAR 60:005
Syrup Tank	401 KAR 60:005
Cook Water Tank	401 KAR 60:005
Liquefaction Tank #1	401 KAR 60:005
Liquefaction Tank #2	401 KAR 60:005
Whole Stillage Tank	401 KAR 60:005
Process Condensate Tank	401 KAR 60:005
Methanol Storage	401 KAR 60:005
Diesel Storage	401 KAR 60:005

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

2. PM, SO_2, HAP, and visible fugitive dust emissions, measured by applicable reference methods, or an equivalent or alternative method specified in 40 C.F.R. Chapter I, or by a test method specified in the state implementation plan shall not exceed the respective limitations specified herein.

3. Source-Wide Emission Limitations on Potential to Emit

   a. To preclude the applicability of 401 KAR 50:020, Title V permits, the total annual emissions from the source shall not exceed the emission limits listed in Table 1.

Table 1
Source-Wide Emission Limits

Pollutant	Emission Limit - tons per year
Total PM	225
PM_{10}	99.91
SO_2	90
NO_X	90
CO	90
VOC	90
Each Individual HAP	9
Total HAP	23.85

Compliance Demonstration Method:

Compliance shall be determined by calculating and recording monthly emission rates and rolling 12-month total emissions. If PM_{10} rolling 12-month total emissions ever exceed 90 tons per year for the previous 12 months, compliance shall be determined based on a 365-day total for each day of the following month. Similarly, if total HAP rolling 12-month total emissions ever exceed 22.5 tons per year for the previous 12 months, compliance shall be determined based on a 365-day total for each day of the following month.

   b. The permittee shall calculate and record quarterly actual monthly emissions and total emissions for the previous 12-month period for the emission units listed in this permit. In place of actual emission rates, the permittee may use worst-case emission rates.

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

c. The permittee shall retain documentation of emission calculations on site for a minimum of 5 years. The documentation shall be made available for inspection by the Division or U.S. EPA upon request.

4. Pursuant to 401 KAR 63:020, Section 3, persons responsible for a source from which hazardous matter or toxic substances may be emitted shall provide the utmost care and consideration, in the handling of these materials, to the potentially harmful effects of the emissions resulting from such activities. No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants.

Compliance Demonstration Method:

Refer to Section E and Section F.9.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b-IV-1 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place (as defined in this permit), and time of sampling or measurements;
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results; and
   f. Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [401 KAR 52:030 Section 3(1)(f)1a and Section 1a-7 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

3. In accordance with the requirements of 401 KAR 52:030 Section 3(1)f the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
   a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
   b. To access and copy any records required by the permit:
   c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

   Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Sections 1b-V-1 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:030 Section 22. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
   a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
   b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.

8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7 above) to the Regional Office listed on the front of this permit within 30 days. Deviations from permit requirements, including those previously reported under F.7 above, shall be included in the semiannual report required by F.6 [Sections 1b-V, 3 and 4 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

9. Pursuant to 401 KAR 52:030, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit in accordance with the following requirements:
   a. Identification of each term or condition;
   b. Compliance status of each term or condition of the permit;
   c. Whether compliance was continuous or intermittent;
   d. The method used for determining the compliance status for the source, currently and over the reporting period.
   e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications shall be mailed to the following addresses:

Division for Air Quality Paducah Regional Office 130 Eagle Nest Drive Paducah, KY 42003	Division for Air Quality Central Files 803 Schenkel Lane Frankfort, KY 40601

10. In accordance with 401KAR 52:030, Section 3(1)(d), the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee. If a KYEIS emission survey is not mailed to the permittee, then the permittee shall comply with all other emission reporting requirements in this permit.

11. The Cabinet may authorize the temporary use of an emission unit to replace a similar unit that is taken off-line for maintenance, if the following conditions are met:
    a. The owner or operator shall submit to the Cabinet, at least ten (10) days in advance of replacing a unit, the appropriate Forms DEP7007AI to DD that show:
        (1) The size and location of both the original and replacement units; and
        (2) Any resulting change in emissions;
    b. The potential to emit (PTE) of the replacement unit shall not exceed that of the original unit by more than twenty-five (25) percent of a major source threshold, and the emissions from the unit shall not cause the source to exceed the emissions allowable under the permit;
    c. The PTE of the replacement unit or the resulting PTE of the source shall not subject the source to a new applicable requirement;
    d. The replacement unit shall comply with all applicable requirements; and
    e. The source shall notify Regional office of all shutdowns and start-ups.
    f. Within six (6) months after installing the replacement unit, the owner or operator shall:
        (1) Re-install the original unit and remove or dismantle the replacement unit; or
        (2) Submit an application to permit the replacement unit as a permanent change.

SECTION G - GENERAL PROVISIONS

1. General Compliance Requirements

   a. The permittee shall comply with all conditions of this permit. A noncompliance shall be a violation of 401 KAR 52:030 Section 3(1)(b) and a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act). Noncompliance with this permit is grounds for enforcement action including but not limited to the termination, revocation and reissuance, revision, or denial of a permit [Section 1a-2 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

   b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a-5 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

   c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:030 Section 18. The permit will be reopened for cause and revised accordingly under the following circumstances:
      (1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:030 Section 12;
      (2) The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
      (3) The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

      Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

   d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Sections 1a- 6 and 7 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

   e. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:030 Section 3(1)(c)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:030 Section 7(1)].

g. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-11 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

i. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens. [Section 1a-12-b of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038 Section 3(6) [Section 1a-9 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:030 Section 11(3)].

l. This permit does not convey property rights or exclusive privileges [Section 1a-8 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.

n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry.

o. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders.

SECTION G - GENERAL PROVISIONS (CONTINUED)

p. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

q. Pursuant to 401 KAR 52:030, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with:
(1) Applicable requirements that are included and specifically identified in this permit; and
(2) Non-applicable requirements expressly identified in this permit.

2. Permit Expiration and Reapplication Requirements

a. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:030 Section 12].

b. The authority to operate granted through this permit shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:030 Section 8(2)].

3. Permit Revisions

a. Minor permit revision procedures specified in 401 KAR 52:030 Section 14(3) may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:030 Section 14(2).

b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

SECTION G - GENERAL PROVISIONS (CONTINUED)

4. Construction, Start-Up, and Initial Compliance Demonstration Requirements

   a. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.

   b. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, with a copy to the Division's Frankfort Central Office, notification of the following:
      (1) The date when construction commenced.
      (2) The date of start-up of the affected facilities listed in this permit.
      (3) The date when the maximum production rate specified in the permit application was achieved.

   c. Pursuant to 401 KAR 52:030, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.

   d. For those affected facilities for which construction is authorized by this permit, a source shall be allowed to construct with the final permit. Operational or final permit approval is not granted by this permit until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055. If compliance is not demonstrated within the prescribed timeframe provided in 401 KAR 50:055, the source shall operate thereafter only for the purpose of demonstrating compliance, unless otherwise authorized by Section I of this permit or order of the Cabinet.

   e. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. Testing must also be conducted in accordance with General Provisions G.5 of this permit.

   f. Terms and conditions in this permit established pursuant to the construction authority of 401 KAR 51:017 or 401 KAR 51:052 shall not expire.

SECTION G - GENERAL PROVISIONS (CONTINUED)

5. Testing Requirements

   a. Pursuant to 401 KAR 50:045 Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least Thirty (30) days prior to the test.

   b. Pursuant to 401 KAR 50:045 Section 5, in order to demonstrate that a source is capable of complying with a standard at all times, any required performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirements on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.

   c. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

6. Acid Rain Program Requirements

   a. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

7. Emergency Provisions

   a. Pursuant to 401 KAR 52:030 Section 23(1), an emergency shall constitute an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or other relevant evidence that:
      (1) An emergency occurred and the permittee can identify the cause of the emergency;
      (2) The permitted facility was at the time being properly operated;
      (3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and,
      (4) The permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division within two (2) working days of the time when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and the corrective actions taken.
      (5) Notification of the Division does not relieve the source of any other local, state or federal

SECTION G - GENERAL PROVISIONS (CONTINUED)

notification requirements.

b. Emergency conditions listed in General Provision G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:030 Section 23(3)].

c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:030 Section 23(2)].

8. Ozone depleting substances

a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
   (1) Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
   (2) Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
   (3) Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
   (4) Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166.
   (5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
   (6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

9. Risk Management Provisions

a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

   RMP Reporting Center
   P.O. Box 1515
   Lanham-Seabrook, MD 20703-1515.

b. If requested, submit additional relevant information to the Division or the U.S. EPA.

SECTION H - ALTERNATE OPERATING SCENARIOS

None

SECTION I - COMPLIANCE SCHEDULE

None

SECTION J - ACID RAIN

None